

REMARKS:

In the foregoing Listing of Claims, Applicants amend claim 1 by further defining that the through holes, which pass from one surface to the other surface of the pressure-sensitive adhesive sheet comprising a base material and a pressure-sensitive adhesive layer, have a diameter in the base material and the pressure-sensitive adhesive layer in a range of 0.5 to 150 μm . This diameter is described in the Specification on page 8, lines 14-17. Claims 1 and 2 remain in the application for consideration by the Examiner. Applicants respectfully request reconsideration and allowance of these claims for reasons that follow.

The Office Action rejected claims 1 and 2 under 35 U.S.C. §103(a) as being unpatentable over Xie (US 6,503,620 B1) and Eevers (US 2001/0055928 A1). The Office Action stated that Xie at column 26, lines 51-54 and column 28, Table X discloses a pressure-sensitive adhesive sheet wherein the adhesive layer has a storage modulus and a loss tangent within the presently claimed range. The Office Action acknowledged that Xie fails to disclose a pressure-sensitive adhesive layer having formed therein a plurality of through holes passing through from one surface to the other surface thereof, the through holes having a diameter in the base material and the pressure-sensitive adhesive layer the range of 0.1 to 300 μm . The Office Action cited the teachings of Eevers as teaching a pressure-sensitive adhesive layer having formed therein a plurality of through holes passing through

from one surface to the other surface thereof, the through holes having a diameter in the base material and the pressure-sensitive adhesive layer in the range of 0.1 to 300 μm , citing paragraphs 0014 and 0030 of Eevers. Applicants respectfully traverse this rejection.

The teachings of Eevers do not disclose or suggest through holes having a diameter in the base material and the pressure-sensitive adhesive layer in the range of “0.1 to 300 μm ” as alleged in the Office Action. At best, Eevers proposes through holes with a diameter of 0.17 to 0.80 mm (¶ 0014), that is 170 to 800 μm , which is outside the presently claimed range of the through holes having a diameter in the base material and the pressure-sensitive adhesive layer in a range of 0.5 to 150 μm . Since the diameter range for the presently claimed through holes is 0.5 to 150 μm and completely outside the range proposed by Eevers of 170 to 800 μm , one of ordinary skill in the art would have absolutely no reason within the teachings of Eevers and Xie to a pressure-sensitive adhesive comprising, *inter alia*, a base material and a pressure-sensitive adhesive layer, where both the base material and the pressure-sensitive adhesive layer have through holes with a diameter in a range of 0.5 to 150 μm , as presently claimed. At least for this reason, Applicants respectfully submit that the presently claimed invention is patently distinguishable from the teachings of Xie and Eevers.

The Office Action stated “It would have been obvious ... to have provided the through holes in Xie et al. in order to increase adherence and prevent delamination as taught by Eevers” apparently as a reason for the motivation to combine Xie and Eevers; namely, as a motivation to introduce the holes of Eevers in the laminate of Xie, which is related to pressure-sensitive adhesive (PSA) label. However, such reasoning is contrary to the understanding of those skilled in the art. For example, when a PSA label has through holes, the adhesive area becomes smaller. In common PSA labels, the smaller the adhesive area is, the weaker the adhesive force is. In other words, those skilled in the art understand that including through holes in a PSA label reduces the adhesiveness of the PSA label. At least for this reason, one of ordinary skill in the art would not use a plurality of through holes in the multilayer composite PSA proposed by Xie, because this would reduce the ability of the multilayer composite PSA to adhere to surfaces that is contrary to the objectives of Xie.

Moreover, the device proposed by Eevers is concerned with preventing delamination of the chips or parts therefrom during a dicing step (§ 0005) and primarily relates to a dicing step using a water stream (§ 0004), while Xie is not so concerned. In addition, the adhesive tape proposed by Eevers is a “water-permeable adhesive tape” and those persons skilled in the art understand that the PSA label of Xie would not and should not be used in such situations. In

summary, the teachings of Xie and Eevers are concerned with different areas within the adhesive art and, in fact, teach away from their combination in a manner as proposed in the outstanding Office Action.

For at least the foregoing reasons, a person of ordinary skill in the art would have no motivation or reason to introduce the holes of Eevers to the adhesive laminate of Xie. Therefore, the presently claimed invention cannot be obvious over the combination of Xie and Eevers.

Applicant respectfully submits that the data in the Specification show and illustrate the unobviousness of the presently claimed invention. For example, the examples in the Specification demonstrate a relationship between the size of the presently claimed through holes and the presently claimed storage modulus and loss tangent of the pressure-sensitive adhesive layer. Consider, for example, Examples 1-6 and Comparative Examples 1 and 2, and Table 1 on pages 20-25 in the Specification. When through holes are formed in materials having a storage modulus or loss tangent outside the presently claimed range, the through hole diameter after hot pressing is nearly or almost all lost. More importantly, the air entrapment removability of the resulting pressure-sensitive adhesive sheets is significantly diminished. On the other hand, when through holes are formed in materials having a storage modulus or loss tangent within the presently claimed range, the through hole diameter after hot pressing is maintained. Furthermore, the

air entrapment removability of the resulting pressure-sensitive adhesive sheets according to Applicants' claimed invention is excellent.

In addition, the data in Table 1 on page 25 of the Specification demonstrates that pressure-sensitive adhesive sheets having through holes formed therein for which the pressure-sensitive adhesive layer has a storage modulus and a loss tangent, as presently claimed, easily eliminate air entrapment. This remarkable air entrapment removability of the presently claimed invention (Examples 1-6) is unexpectedly superior to that of Comparative Examples 1 and 2, which correspond to the prior art.

At least for these reasons, Applicants respectfully submit that claims 1 and 2 are patently distinguishable from the teachings of Xie and Eevers within the meaning of 35 U.S.C. §103. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection set forth in the outstanding Office Action over the teachings of Xie and Eevers.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance and request a timely notice to this effect. If questions relating to patentability remain, Applicants invite the Examiner to contact the undersigned by telephone.

Please charge any unforeseen fees that may be due to Deposit Account No.

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Respectfully submitted,

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